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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,851	12/11/2003	Mark Rosenzweig	EURO-251 (501174.20251)	9009
26418	7590	10/20/2005	EXAMINER	
REED SMITH, LLP ATTN: PATENT RECORDS DEPARTMENT 599 LEXINGTON AVENUE, 29TH FLOOR NEW YORK, NY 10022-7650			GREENE, JASON M	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,851

Applicant(s)

ROSENZWEIG, MARK

Examiner

Jason M. Greene

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings were received on 4 April 2005. These drawings are acceptable.

Specification

2. The disclosure is objected to because of the following informalities: The phrase "pressure valve 126" at page 7, line 4 should be rewritten as "pressure switch 120" to correct the reference character and to preserve consistency of terminology. Similarly, the phrase "pressure valve" at page 7, lines 5 and 7 should also be rewritten as "pressure switch".

Appropriate correction is required.

Claims

3. With regard to claim 5, the Examiner suggests Applicants rewrite the word "space" in line 2 as "spaced" to correct a minor grammatical informality.

4. With regard to claim 6, the Examiner suggests Applicants rewrite the phrase “the vacuum device” as “the vacuum cleaner” to provide improved antecedent basis and to preserve consistency of terminology.

5. Claim 7 recites the phrase “when said indicator is connected to said indicator” in line 2. Since claim 1, from which claim 7 depends, recites the indicator being connected to the power source by the pressure actuated switch, it appears as though the phrase was intended to read as “when said indicator is connected to said power source”. The claim has been treated accordingly for examination purposes. If this treatment is correct, the Examiner suggests Applicants amend the claim accordingly to correct an apparent typographical error.

6. Claim 12 recites the phrase “the nozzle housing” in line 5. However, the claim fails to previously recite the vacuum cleaner having a nozzle housing. It appears as though the phrase was intended to reference the recited “muzzle housing” in line 4. The Examiner notes that the claim has been treated accordingly for examination purposes. If this treatment is correct, the Examiner suggests that Applicants amend the claim accordingly to provide improved antecedent basis. Additionally, the Examiner suggests Applicants insert the phrase “and the” between the words “source” and “indicator” in line 8 of claim 12 to correct an apparent typographical error and to improve the readability of the claim language. Furthermore, the Examiner also suggests Applicants insert a period at the end of line 10 of claim 12 to correct a minor grammatical informality.

7. The Examiner notes that the transitional phrase "including" has been interpreted as being open-ended.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3, 5-7 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin.

With regard to claims 1 and 2, Martin discloses a filter monitor for sensing the condition of a filter (dust bag 72) in a vacuum cleaner (20) connected to a power source (electrical plug 28), the vacuum cleaner having a flow chamber (dust collecting compartment 70) between the filter and a flow inducing device (motor driven fan unit 58) selectively driven by the power source, comprising an electrical circuit (146) including a pressure actuated switch (switch 174 in dust bag pressure sensor 122), and an indicator light (46) visible to the user connected to the circuit, wherein the pressure actuated switch is closed to complete the circuitry between the indicator and electrical power

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source in response to an increase in pressure drop across the filter indicating that the filter requires cleaning or replacement in Figs. 1, 4 and 6 and col. 4, line 30 to col. 9, line 48.

With regard to claim 3, Martin disclose the circuit including a resistor (178) to reduce voltage across the circuit to a level compatible with the indicator in Fig. 6 and col. 9, lines 29-48.

With regard to claim 5, Martin discloses the pressure actuated switch (174) including a pressure chamber with a pair of electrical leads (not numbered) and a conductive member (not numbered) spaced from at least one lead and biased away from the other at least one lead, wherein the conductive member is displaced to contact both leads in response to an increase in pressure drop across the filter resulting in a decrease in pressure in the vacuum chamber due to clogging of the filter in Figs. 4 and 6, col. 6, lines 35-50 and col. 9, lines 13-48.

With regard to claim 6, Martin discloses the filter monitor including a port (the port connecting an area downstream from the filter bag to the dust bag pressure sensor 122) connected to the vacuum cleaner downstream the filter in Figs. 1, 4 and 6 and col. 4, line 30 to col. 9, line 48.

With regard to claim 7, Martin discloses the circuit including a latching relay (160), said latching relay being latched when the indicator (46) is connected to the power source by the pressure actuated switch in Fig. 6 and col. 10, line 52 to col. 11, line 10.

With regard to claims 12 and 15, Martin discloses a vacuum cleaner (20) having a serviceable filter (dust bag 72) and a monitor for sensing the condition of the filter, comprising a housing (canister 24) for mounting a motor (not numbered, see col. 5, lines 39-41), a nozzle housing (intake opening 66 on base 62) for receiving an intake device (hose 34 of handle 36), a filter (the dust bag 72) disposed between the nozzle housing and the motor, an indicator light (46) for indicating a need to service the filter, and circuitry (146) connecting the indicator light to a power source including a pressure actuated switch (switch 174 in dust bag pressure sensor 122) that completes a circuit between the power source and the indicator when the pressure between the filter and motor indicates a filter condition suggesting cleaning or replacement in Figs. 1, 4 and 6 and col. 4, line 30 to col. 9, line 48.

With regard to claim 13, Martin discloses the pressure actuated switch (174) including a pressure chamber with a pair of electrical leads (not numbered) and a conductive member (not numbered) spaced from at least one lead and biased away from the other at least one lead, wherein the conductive member is displaced to contact both leads in response to an increase in pressure drop across the filter resulting in a

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decrease in pressure in the vacuum chamber due to clogging of the filter in Figs. 4 and 6, col. 6, lines 35-50 and col. 9, lines 13-48.

With regard to claim 14, Martin discloses the circuit including a latching relay (160) for latching the indicator (46) in an indicating condition after a pressure indicating a need to clean or replace the filter has been detected in Fig. 6 and col. 10, line 52 to col. 11, line 10.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-3, 5-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurz in view of Martin.

With regard to claims 1 and 2, Kurz discloses a filter monitor for sensing the condition of a filter in a vacuum cleaner (appliance 24) connected to a power source (the 220V source connected to terminals 29a and 29b) the vacuum cleaner having a flow chamber including the filter and a flow inducing device (a motor and a fan)

selectively driven by the power source, comprising an electrical circuit (see Fig. 2) including a pressure actuated switch (S), and an indicator light (lamp 22) visible to the user connected to the circuit, wherein the pressure actuated switch is closed to complete the circuitry between the indicator and electrical power source in response to an increase in pressure drop across the filter indicating that the filter requires cleaning or replacement in Figs. 1-3 and col. 3, line 1 to col. 5, line 20.

Kurz discloses the filter monitor being disposed in a vacuum cleaner and the pressure actuated switch being disposed adjacent the vacuum pressure source (the flow inducing device, see col. 3, lines 29-31). While it is very well known that it is customary to design vacuum cleaners such that the filter is upstream from the flow inducing device, Kurz is silent as to the specific construction of the vacuum cleaner and thus does not explicitly disclose the vacuum cleaner having a flow chamber between the filter and the flow inducing device.

Miller teaches disposing the flow-inducing device (58) downstream from the filter (dust bag 72) such that there exists flow chamber (70) between the filter and the flow inducing device in Fig. 4.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the upstream filter arrangement of Miller into the vacuum cleaner of Kurz to allow the filter to collect dust prior to the air reaching the motor to increase the life expectancy of the motor, as is well known in the art.

With regard to claim 3, Kurz disclose the circuit including a resistor (R1) to reduce voltage across the circuit to a level compatible with the indicator in Fig. 2 and col. 4, lines 16-22.

With regard to claim 5, Kurz discloses the pressure actuated switch (S) including a pressure chamber with a pair of electrical leads (contact element 15 and lead connecting point 31) and a conductive member (contact pin 15) spaced from at least one lead and biased away from the other at least one lead, wherein the conductive member is displaced to contact both leads in response to an increase in pressure drop across the filter resulting in a decrease in pressure in the vacuum chamber due to clogging of the filter in Figs. 1-3 and col. 3, line 1 to col. 5, line 20.

With regard to claims 6 and 8-10, Kurz discloses the pressure actuated switch including an ambient air port (13a) to an ambient air source, and wherein the pressure actuated switch is actuated when a predetermined pressure differential exists between the ambient air pressure and air flow downstream of the filter (adjacent the vacuum pressure source), wherein the filter monitor includes a port (adjacent 41) connected to the vacuum cleaner downstream of the filter in col. 3, lines 25-31 and col. 4, line 49 to col. 5, line 2.

With regard to claims 12, 15 and 16, Kurz discloses a vacuum cleaner (appliance 24) having a serviceable filter and a monitor for sensing the condition of the filter,

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comprising a housing (24) for mounting a motor, a nozzle housing (inherent) for receiving an intake device, a filter, an indicator light (incandescent bulb 22) for indicating a need to service the filter, and circuitry (see Fig. 2) connecting the indicator light to a power source including a pressure actuated switch (S) that completes a circuit between the power source and the indicator when the pressure between the filter and motor indicates a filter condition suggesting cleaning or replacement in Figs. 1-3 and col. 3, line 1 to col. 5, line 20.

Kurz discloses the pressure actuated switch being disposed adjacent the vacuum pressure source (the flow inducing device, see col. 3, lines 29-31). While it is very well known that it is customary to design vacuum cleaners such that the filter is upstream from the flow inducing device, Kurz is silent as to the specific construction of the vacuum cleaner and thus does not explicitly disclose the vacuum cleaner having a flow chamber between the filter and the flow inducing device.

Miller teaches disposing the flow inducing device (58) downstream from the filter (dust bag 72) such that the filter is disposed between the nozzle housing (66) and the motor in Fig. 4.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the upstream filter arrangement of Miller into the vacuum cleaner of Kurz to allow the filter to collect dust prior to the air reaching the motor to increase the life expectancy of the motor, as is well known in the art.

With regard to claim 13, Kurz discloses the pressure actuated switch (S) including a pressure chamber with a pair of electrical leads (contact element 15 and lead connecting point 31) and a conductive member (contact pin 15) spaced from at least one lead and biased away from the other at least one lead, wherein the conductive member is displaced to contact both leads in response to an increase in pressure drop across the filter resulting in a decrease in pressure in the vacuum chamber due to clogging of the filter in Figs. 1-3 and col. 3, line 1 to col. 5, line 20.

With regard to claims 7, 11 and 14, Kurz et al. does not disclose the circuit including latching means, said latching means latching the indicator in an indicating condition when said indicator is connected to said power source by the pressure actuated switch after a pressure indicating a need to clean or replace the filter has been detected.

Martin discloses the circuit including a latching relay (160), said latching relay latching the indicator (46) in an indicating condition when said indicator is connected to said power source by the pressure actuated switch after a pressure indicating a need to clean or replace the filter has been detected in Fig. 6 and col. 10, line 52 to col. 11, line 10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the latching relay of Martin into the circuit of Kurz to provide a steady burning indicator light once the pressure threshold is exceeded to ensure that the operator does not fail to observe a intermittently activated indicator light

and to increase the life expectancy of the indicator light by preventing the light from experiencing multiple on-off sequences which can lead to premature failure due to thermal stress, as is well known in the art.

12. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin or Kurz in view of Martin as applied to claims 1 or 12 above, and further in view of Naquin, Jr.

Martin and Kurz do not disclose the indicator being an audible indicator or a light emitting diode.

Naquin, Jr. discloses a similar air filter monitor wherein the indicator is an audible alarm or a LED in Fig. 3 and col. 2, line 7 to col. 4, line 28.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the audible alarm of Naquin, Jr. into the filter monitors of Martin or Kurz in view of Martin to allow an operator to be alerted of the clogged filter condition even if they are not looking at the vacuum cleaner, as is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the LED of Naquin, Jr. into the filter monitors of Martin or Kurz in view of Martin to provide a light having a long life and a low energy requirement, as is well known in the art.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Leathers, Bowerman, Simonsson, Westergren, Minton, Kowalewski, Martinet, Schaefer et al., Richter and Mason references disclose similar filter monitors.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Jason M. Greene
Examiner

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Jason M. Greene
10/18/05

jmg

October 18, 2005